

(19) World Intellectual Property  
Organization  
International Bureau



551186

(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/087803 A1**

- (51) International Patent Classification<sup>7</sup>: **C08L 21/00**, 23/10, 23/12, 23/16, 19/00
- (21) International Application Number: PCT/EP2003/003336
- (22) International Filing Date: 31 March 2003 (31.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (for all designated States except US): **PIRELLI & C. S.p.A.** [IT/IT]; Via Gaetano Negri, 10, I-20123 Milano (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **TIRELLI, Diego** [IT/IT]; Pirelli Labs S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **GALBUSERA, Michele** [IT/IT]; Pirelli Labs S.p.A., 222, Viale Sarca, I-20126 Milano (IT). **CASTEL-LANI, Luca** [IT/IT]; Pirelli Labs S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **PERUZZOTTI, Franco** [IT/IT]; Pirelli Labs S.p.A., 222, Viale Sarca, I-20126 Milano (IT). **ALBIZZATI, Enrico** [IT/IT]; Pirelli Labs S.p.A., Viale Sarca, 222, I-20126 Milano (IT).
- (74) Agents: **GIANNESI, Pier, Giovanni et al.**; Pirelli & C. S.p.A., Viale Sarca, 222, I-20126 Milano (IT).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THERMOPLASTIC MATERIAL COMPRISING A VULCANIZED RUBBER IN A SUBDIVIDED FORM

(57) Abstract: The present invention relates to a thermoplastic material comprising; a) from 5% weight to 95% by weight, preferably from 10% by weight to 60% by weight, of vulcanized rubber in a subdivided form; b) from 5% by weight to 95% by weight, preferably from 40% by weight to 90% by weight, of at least one heterophase copolymer comprising a thermoplastic phase made from a propylene homopolymer or copolymer and an elastomeric phase made from a copolymer of ethylene with an  $\alpha$ -olefin, preferably with propylene; c) from 0% by weight to 90% by weight, preferably from 0% by weight to 50% by weight, of at least one  $\alpha$ -olefin homopolymer or copolymer different from b); the amounts of a), b), c) being expressed with respect to the total weight of a), b) and c) being expressed with respect to the total weight of a) + b) + c). Said thermoplastic material shows improved mechanical properties, in particular, improved elongation at break.

WO 2004/087803 A1